

Prospective evaluation of the potential for avoidance of Acute Medical Assessment Unit admissions via OPAT in a Level 4 Irish Hospital

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Background

Irish hospitals come under increasing pressure for bed availability. It is crucial to identify patients who are suitable for admission avoidance early in their assessment. Outpatient parenteral antimicrobial therapy (OPAT) can provide an opportunity for admission avoidance (1, 2, 3).

We evaluated patients assessed in the AMAU (Acute Medical Assessment Unit) of Tallaght University Hospital over one month to identify OPAT-suitable patients who could have avoided admission if OPAT was initiated on presentation.

Methods

- All adult patients who were assessed in the AMAU between August 29th 2022 and September 23rd of 2022 were included.
- Prospective data was collected by manually reviewing the medical records as well as from the hospital's electronic patient record system. Missing data that was not available on the day of the patients' assessment was collected retrospectively.
- The inclusion and exclusion criteria used to assess OPAT eligibility were based on the National OPAT Guidelines (3).

Results

- 256 AMAU assessments occurred during our study period. 48 of these had a primary differential diagnosis of an infection (18.75%) upon admission (Figure 1).
- Respiratory tract infection was the commonest infective diagnosis (RTI; 28, 58.33%), with a smaller number of patients diagnosed with urinary tract infections (UTI; 10, 20.83%), skin and soft tissue infections (SSTI; 2, 4.16%), gastrointestinal infections (2, 4.15%) and other types of infections (not categorised elsewhere; 4, 8.32%) (Figure 2). One case of septic arthritis (under bone and joint infections, BJI) and one case of viral meningitis were identified.

Figure 1
Proportion of suspected infections

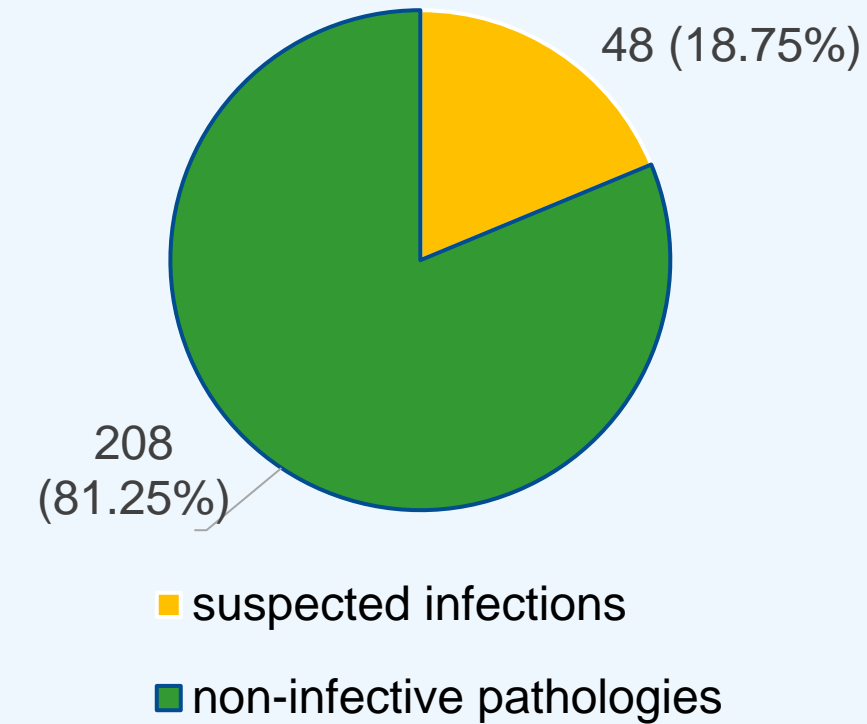
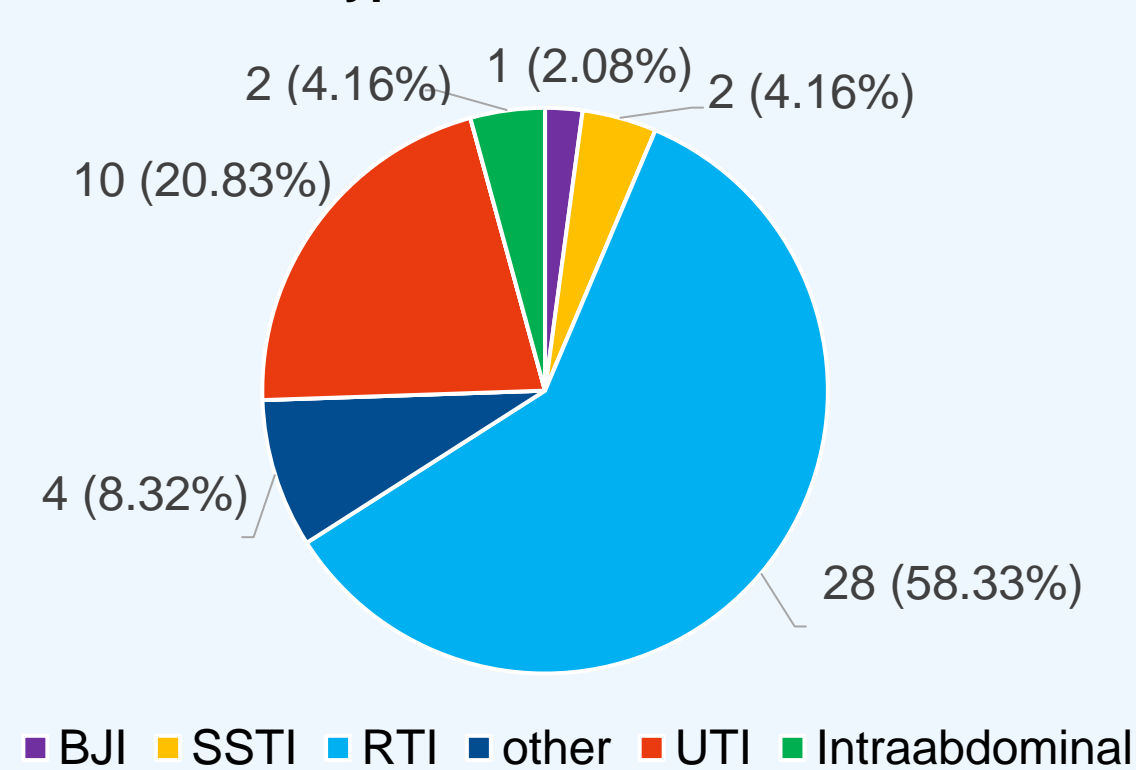


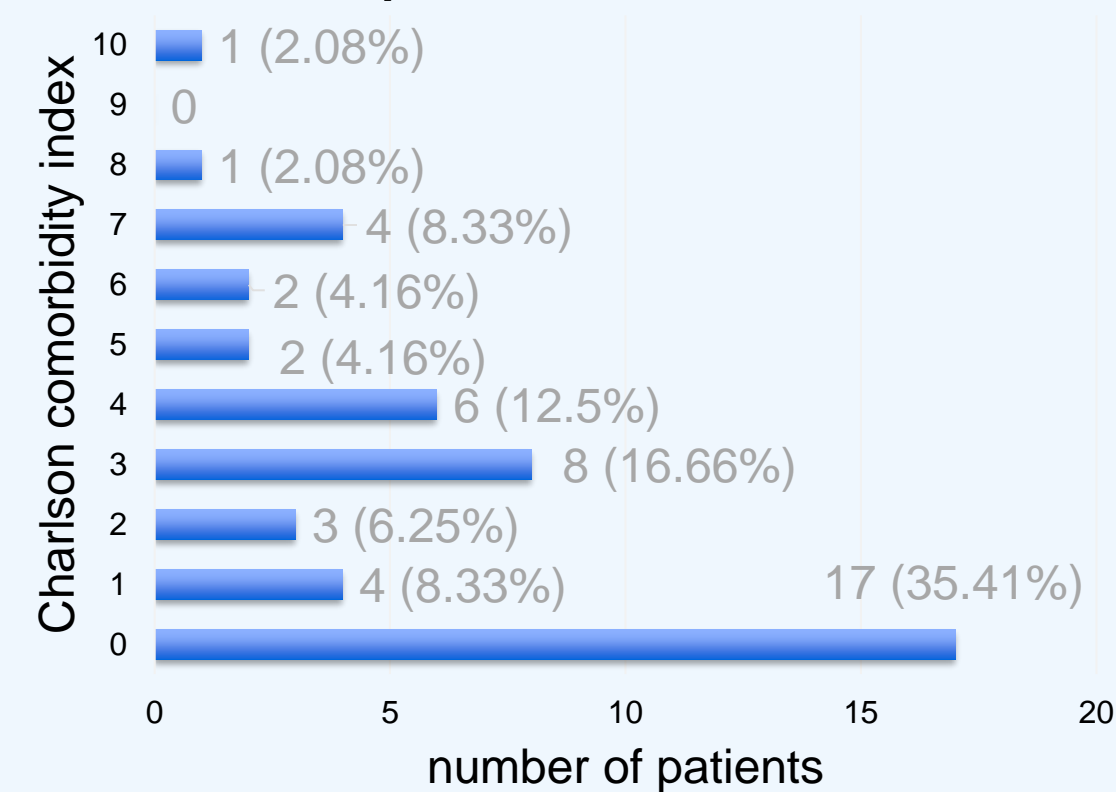
Figure 2
Types of infections



Discussion

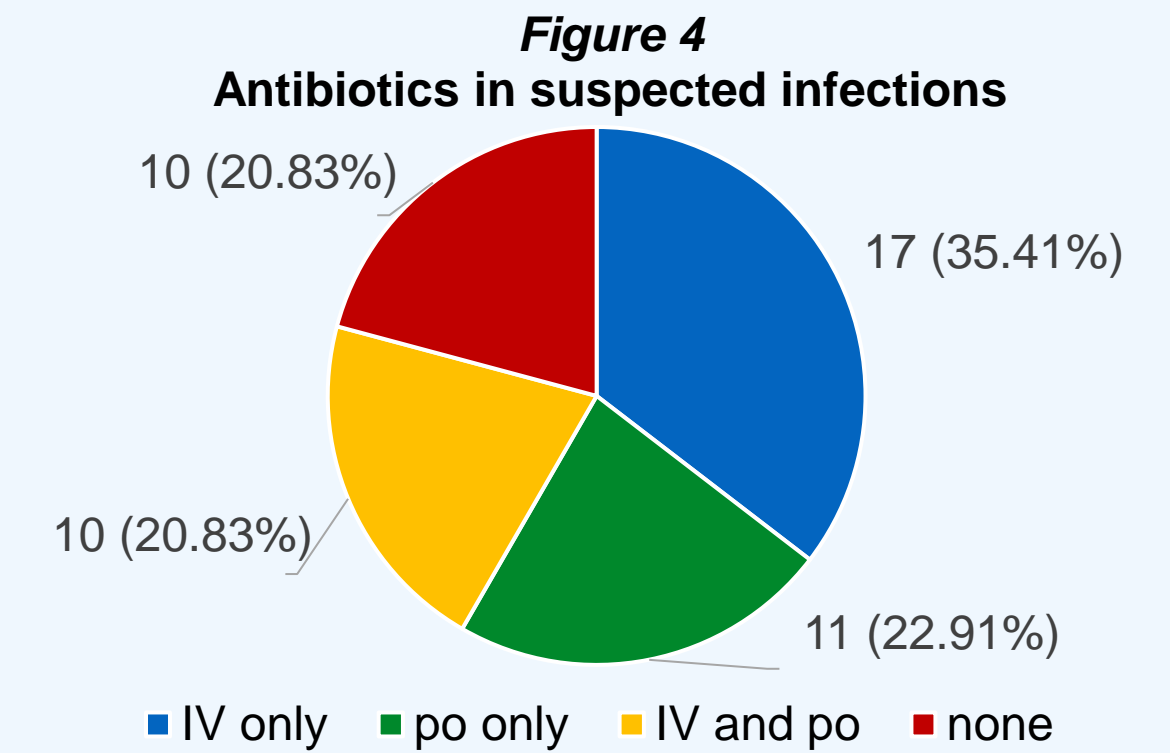
- Delays in diagnostic work up and non-availability of microbiological susceptibility results impaired potential admission avoidance via OPAT for most patients.
- For some cases, where the OPAT treatment regime could be finalised on presentation, patients clinically were not stable to be discharged directly.
- The most common reasons that delayed discharge were waiting on results of diagnostic (mostly radiological and microbiological) tests, the need for further treatment in hospital or the presence of sepsis syndrome.
- There was a case of cellulitis in a prisoner where OPAT could not be delivered because of the patient's primary residence.

Figure 3
Charlson comorbidity index distribution among patients with suspected infections



Limitations

- data was collected only in a single centre
- data was collected only for a period of one month
- only patient condition related factors were looked at, lack of community OPAT availability and delay in getting a peripherally inserted central catheter (PICC) inserted were not taken into consideration (4)



Conclusion

- The audit results indicate that medical patients with infective diagnosis who were admitted via the AMAU during the study period had often multiple comorbidities and required workup that couldn't be completed on the same day. Thus, these patients were appropriately getting admitted via the AMAU for further work up and management.
- A similar study will be planned in the future to identify patients whose admission could be avoided via OPAT both from the AMAU and from the Emergency Department.
- Based on our results we recommend a surgical cohort of patients to be included in the next audit.

References

- Outpatient Parenteral Antimicrobial Therapy (OPAT) Programme, C Bergin, HSE Conference poster, 2011. <https://www.lenus.ie/handle/10147/205638>
- Evaluating an admission avoidance pathway for children in the emergency department: outpatient intravenous antibiotics for moderate/severe cellulitis. L Ibrahim et al. Emergency Medicine Journal. 2017 Dec 1;34(12):780-5.
- National guidelines of the provision of outpatient parental antimicrobial therapy. E Sweeney, N Curtin, E de Barra, K Burns, et al. Ir Med J. Vol 113; No. 7; P123
- Discharge delaying factors for patients suitable for outpatient parenteral antimicrobial therapy (OPAT) in an Irish tertiary hospital during COVID-19. S Staunton, D Rajendran, P Maher et al. JAC – Antimicrobial Resistance. Volume 3, Issue 4, December 2021, dlab163.